6.05 Inventory Estimation Methods

Gross Profit (Margin) Method

Gross profit can be used to prepare interim financial statements or as an estimate if ending inventory is missing or destroyed. First, calculate an estimate of COGS by using the *Historical Gross Profit Percentage*, then back into ending inventory.

Beginning Inventory		100	
+ Purchases		300	
Goods available for sale		400	
(Ending inventory)	???	220	(plugged)
Cost of goods sold		180	

Gross Profit % = 40%
COGS % = 60% (estimated)

So, if Sales = 300 (60%) = **180 COGS**

Retail Inventory Methods

These are rarely used and extremely complicated techniques for estimation of inventory.

Conventional Retail Inventory method

The company keeps track of inventory costs at both cost and retail. Sales, theft losses and employee discounts during the year are recorded at retail and at the end of the year, the company converts ending inventory from retail back to cost by using a cost/retail percentage. This method approximates the results that would be obtained by taking a physical inventory and pricing the goods at the lower of cost or market (LCM).

- Net mark-ups are included in the cost to retail percentage calculation
- Net mark-downs are not included in the cost to retail percentage calculation.

	Cost		Retail	
Beginning Inventory	X		X	
+ Purchases	X		X	
+ Freight in	X			
+ Net Markups			X	
Goods available for sale	X	/	X	= C/R%
– Net Markdowns			(X)	
+ Sales price of goods available for sale			X	
– Losses			(X)	
– Sales @ retail			(X)	
Ending inventory @ **retail**			X	
× C/R%				
Equals ending inventory at cost	X			

- **Net mark-ups** = mark-ups – mark-up cancellations
- **Net mark-downs** = mark-downs – mark-down cancellations

LIFO Retail Inventory method

The LIFO Retail method approximates the **original cost** of the merchandise as opposed to the conventional retail method which approximates LCM. The two differences are that:

- Net mark-ups and net mark-downs are **both included** in the cost to retail percentage calculation.
- Beginning inventory is **not** included in the cost to retail percentage calculation.

Firm Purchase Commitments

A non-cancelable agreement to buy inventory in the future. If it is expected that a loss will occur in the future, the loss is recognized at the time of the decline in price. The loss is the difference between the contract price and the market price of the minimum required amount of inventory that must be purchased in the future.

Estimated loss (I/S)	X	
Estimated liability		X